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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09/836,351	04/18/2001	Jang-Jin Yoo	8733-421.00	8728

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EXAMINER
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RUDE, TIMOTHY L

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	Applicant(s)
09/836,351	YOO ET AL.
Examiner	Art Unit
Timothy L Rude	2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 18 April 2001.  
2a) This action is FINAL.                    2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-56 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_\_ is/are allowed.  
6) Claim(s) \_\_\_\_\_ is/are rejected.  
7) Claim(s) \_\_\_\_\_ is/are objected to.  
8) Claim(s) 1-56 are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.  
12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.  
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
\_\_\_\_\_  
The following document(s) filed in a foreign language provisional application has been received

### Attachments

- 1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other

**DETAILED ACTION**

***Election/Restrictions***

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species I, claims 1-16, 33, 34, 37, and 38, Embodiments 1, 3, and 5, Figures 10, 15, and 20, drawn to an IPS-LCD device comprising a plurality of common electrodes electrically connected to a common line, classified in class 349, subclass 141.

Species II, claims 17-32, 35, 36, 39-56, Embodiments 2 and 4, Figures 14 and 18, drawn to an IPS-LCD device comprising a plurality of common electrodes electrically connected to a common line electrically connected to first and second auxiliary common lines, classified in class 349, subclass 139.

2. Furthermore, Species I contains claims directed to the following patentably distinct Sub-species and Sub-sub-species of the claimed invention:

Sub-species A1, claim 2, drawn to a dielectric protrusion with a smaller dielectric constant than the liquid crystal layer.

Sub-species A2, claim 3, drawn to a dielectric protrusion with a larger dielectric constant than the liquid crystal layer.

Sub-species B1, claim 6, drawn to a plurality of dielectric protrusions disposed over a plurality of pixel electrodes (Embodiment 1).

Sub-sub-species B1A, claim 8, drawn to first and second protrusions formed on the first substrate.

Sub-sub-species B1B, claim 9, drawn to first and second protrusions formed on the second substrate.

Sub-species B2, claim 7, drawn to a plurality of dielectric protrusions disposed over a plurality of common electrodes.

Sub-sub-species B2A, claim 33, drawn to first and second protrusions formed on the first substrate.

Sub-sub-species B2B, claim 34, drawn to first and second protrusions formed on the second substrate.

Sub-species B3, claim 37, drawn to a drawn to a plurality of dielectric protrusions disposed over a plurality of pixel electrodes and over the common lines.

Sub-species B4, claim 38, drawn to a drawn to a plurality of dielectric protrusions disposed over a plurality of pixel electrodes and over a plurality of common electrodes.

Sub-species B5, claims 10 and 11, drawn to a chevron shaped dielectric protrusion (Embodiments 3 and 5).

Sub-species D1, claim 13, drawn to a common electrode selected from a group

Sub-species D2, claim 14, drawn to a common electrode selected from a group that contains exclusively ITO and IZO.

Sub-species E1, claim 15, drawn to liquid crystal material with positive dielectric anisotropy.

Sub-species E2, claim 16, drawn to liquid crystal material with negative dielectric anisotropy.

Claims 1, 4, 5, and 12 are generic to Sub-species A1-E2.

3. Species II contains claims directed to the following patentably distinct Sub-species and Sub-sub-species of the claimed invention:

Sub-species F1, claim 18, drawn to a dielectric protrusion with a smaller dielectric constant than the liquid crystal layer.

Sub-species F2, claim 19, drawn to a dielectric protrusion with a larger dielectric constant than the liquid crystal layer.

Sub-species G1, claim 22, drawn to a plurality of dielectric protrusions disposed over a plurality of pixel electrodes (Embodiment 2).

Sub-sub-species G1A, claim 24, drawn to first and second protrusions formed on the first substrate.

Sub-sub-species G1B, claim 25, drawn to first and second protrusions

Sub-species G2, claim 23, drawn to a plurality of dielectric protrusions disposed over a plurality of common electrodes.

Sub-sub-species G2A, claim 35, drawn to first and second protrusions formed on the first substrate.

Sub-sub-species G2B, claim 36, drawn to first and second protrusions formed on the second substrate.

Sub-species G3, claim 39, drawn to a drawn to a plurality of dielectric protrusions disposed over a plurality of pixel electrodes and over a plurality of common electrodes.

Sub-species G4, claims 40-56, drawn to a chevron shaped dielectric protrusion (Embodiment 4).

Sub-sub-species G4A, claim 41, drawn to a chevron shaped dielectric protrusion with bends at each intersection with one of the common and pixel electrodes.

Sub-sub-species G4B, claim 42, drawn to a chevron shaped dielectric protrusion with bends at alternating intersections with the common and pixel electrodes.

Sub-sub-species G4C, claims 43-56, drawn to a chevron shaped dielectric protrusion with bends at each intersection with the common and pixel electrodes.

Sub-species H1, claim 29, drawn to a common electrode selected from a group that does not contain ITO and IZO.

Sub-species H2, claim 30, drawn to a common electrode selected from a group that contains exclusively ITO and IZO.

Sub-species I1, claim 31, drawn to liquid crystal material with positive dielectric

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Sub-species I2, claim 32, drawn to liquid crystal material with negative dielectric anisotropy.

Claims 17, 20, 21, and 28 are generic to Sub-species F1-I2.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, I or II, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Also, Applicant is required to elect one from each Sub-species and in turn, Sub-sub-species, e.g., if Species I is selected, select one of B1A, B1B, B2A, B2B, B3, B4, or B5 along with one from each of the other lettered Sub-species, A, C, D, and E.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species MPEP § 809.02(a).

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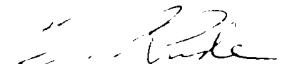
Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (703) 305-0418. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.



Timothy L Rude  
Examiner  
Art Unit 2871